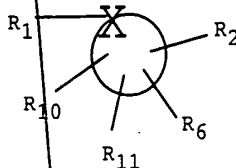


WHAT IS CLAIMED IS:

1. A compound of the formula:



and pharmaceutically acceptable salts thereof  
wherein

X is N or CH;



is a cyclic 5-10 membered cyclic ring which  
is saturated and which may contain 1 or 2 additional ring  
heteroatoms selected from the group consisting of O, S  
and N, with the remaining ring atoms being carbon atoms;

R<sub>1</sub> is (CH<sub>2</sub>)<sub>n</sub> - Z - (R<sub>5</sub>), Q, hydrogen or lower  
alkyl;

R<sub>2</sub> is hydrogen or Q;

Q and Q' may be the same or different and are  
independently

(CH<sub>2</sub>)<sub>n<sub>1</sub></sub> - Y - (CH<sub>2</sub>)<sub>n<sub>2</sub></sub> - CH;

Z is a chemical bond, CH<sub>2</sub>, O, S or NH;

Y is CH<sub>2</sub>, O, S or NH;

R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are independently cyclic rings  
containing 6-14 ring carbon atoms, and containing no  
hetero ring atoms, which cyclic rings may be completely  
saturated, partially unsaturated or aromatic, and which

are unsubstituted or substituted with an electron donating group or electron withdrawing group;

$R_3$  and  $R_4$  may be fused to form a cyclic ring structure containing 12-28 carbon atoms;

*5*  
*Substit*  
 $R_6$ ,  $R_{10}$  and  $R_{11}$  are independently hydrogen or lower alkyl, which is unsubstituted or substituted with an electron withdrawing group or electron donating group;

$n_2$  is 0-8; and

$n$  and  $n_1$  are independently 1-8, provided that either  $R_1$  is Q or  $R_2$  is Q'.

2. The compound according to Claim 1 wherein Y is O or  $\text{CH}_2$ .

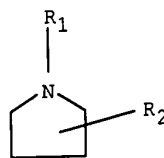
3. The compound according to Claim 1 wherein  $n_2$  is 0.

4. The compound according to Claim 1 wherein  $n_1$  is 1 and  $n_2$  is 0.

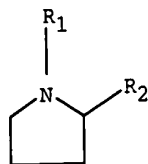
5. The compound according to Claim 1 wherein  $R_1$  is  $(\text{CH}_2)_n - \text{Z} - \text{R}_5$ , hydrogen or lower alkyl and  $R_2$  is Q'.

6. The compound according to Claim 1 wherein  $R_1$  is Q and  $R_2$  is Q'.

7. The compound according to Claim 5 having the formula:



8. The compound according to Claim 7 having the formula:

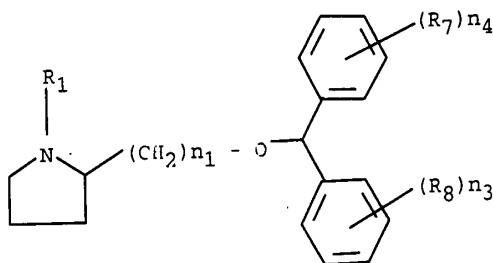


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9. The compound according to Claim 7 or 8 wherein Y is 0.

10 *Sub 102* 10. The compound according to any one of Claims 7, 8 or 9 wherein R<sub>3</sub> and R<sub>4</sub> are independently aromatic rings.

11. The compound according to Claim 5 having the formula:



15

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wherein

n<sub>3</sub> and n<sub>4</sub> are independently 1-5;

n<sub>1</sub> is 1-8;

R<sub>1</sub> is (CH<sub>2</sub>)<sub>n</sub> - Z - R<sub>5</sub>, hydrogen or lower alkyl,

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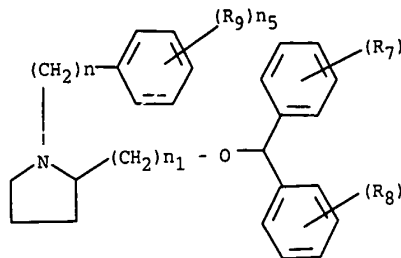
R<sub>7</sub> and each R<sub>8</sub> are independently hydrogen, an electron donating or electron withdrawing group;

Z is CH<sub>2</sub>, O, S or NH; and

R<sub>5</sub> is a cyclic ring containing 6-14 ring carbon atoms and is aromatic and may be unsubstituted or substituted with an electron withdrawing group or electron donating group.

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12. The compound according to Claim 11 having the formula:



wherein

$R_9$  is hydrogen, an electron donating group or electron withdrawing group and;

$n_5$  is 1-5.

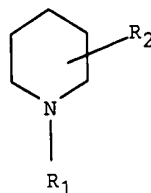
13. The compound according to Claim 1, 10 or 12 wherein  $n$  is 1.

14. The compound according to any one of Claims 1, 11 or 12 wherein the electron donating group is amino, hydroxy or lower alkoxy, and the electron withdrawing group is halo, lower alkyl, nitro or nitrile.

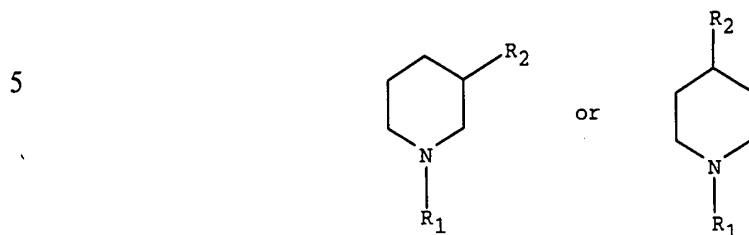
15. The compound according to Claim 14 wherein the electron donating group is lower alkoxy and the electron withdrawing group is halo.

16. The compound according to Claim 11 or 12 wherein  $R_7$  and  $R_8$  are halo.

17. The compound according to Claim 1 having the formula:



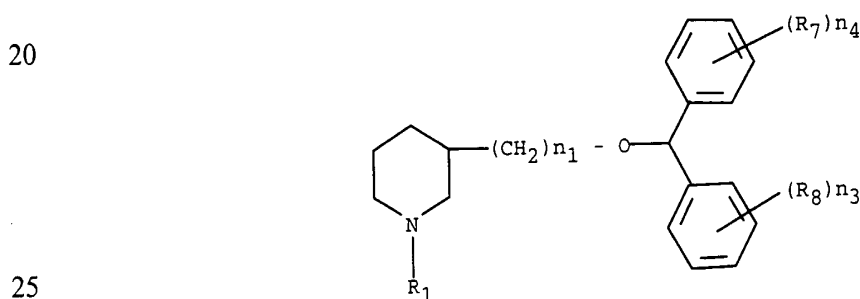
18. The compound according to Claim 17 having the formula:



19. The compound according to Claim 17 or 18 wherein Y is O.

20. The compound according to Claim 17, 18 or 19 wherein  $R_3$  and  $R_4$  are independently aromatic.

21. The compound according to Claim 17 having the formula:



wherein

$n_3$  and  $n_4$  are independently 1-5;

$n_1$  is 1-8;

$R_1$  is  $(CH_2)_n - Z - R_5$ , hydrogen or lower alkyl;

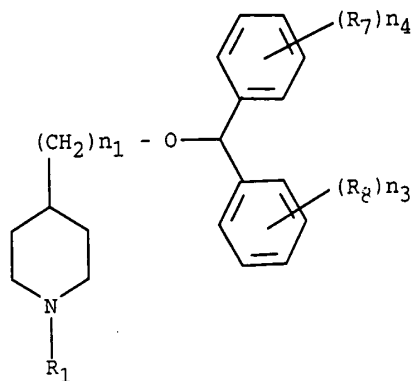
each  $R_7$  and each  $R_8$  are the same or different

and are independently hydrogen, an electron donating or electron withdrawing group;

Z is CH<sub>2</sub>, O, S or NH;

R<sub>5</sub> is a cyclic ring containing 6-14 ring carbon atoms and is aromatic and may be unsubstituted or substituted with an electron withdrawing group or electron donating group.

22. The compound according to Claim 17 having the formula:



wherein

n<sub>3</sub> and n<sub>4</sub> are independently 1-5;

n<sub>1</sub> is 1-8;

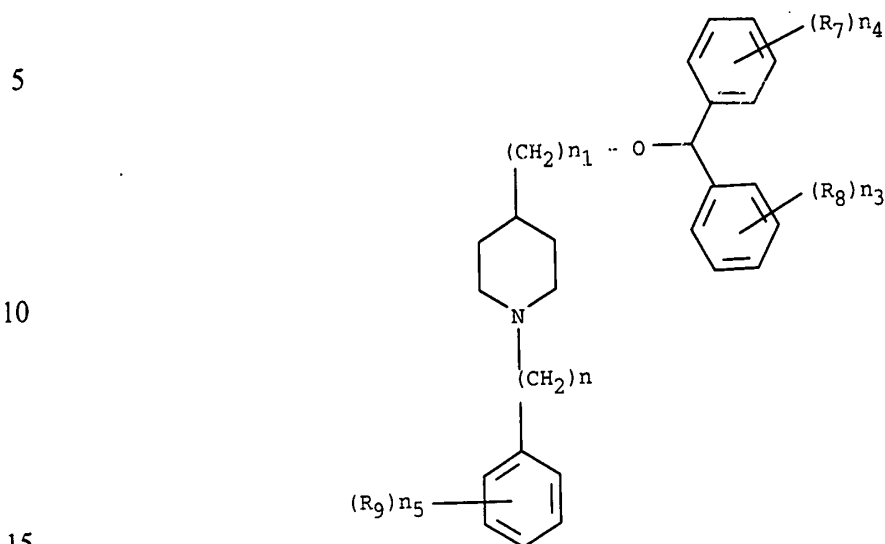
R<sub>1</sub> is (CH<sub>2</sub>)<sub>n</sub> - Z - R<sub>5</sub>, hydrogen or lower alkyl;

each R<sub>7</sub> and each R<sub>8</sub> are the same or different and are independently hydrogen, an electron donating or electron withdrawing group;

Z is CH<sub>2</sub>, O, S or NH;

R<sub>5</sub> is a cyclic ring containing 6-14 ring carbon atoms and is aromatic and may be unsubstituted or substituted with an electron withdrawing group or electron donating group.

23. The compound according to Claim 22 having the formula:



wherein

each  $\text{R}_7$  and each  $\text{R}_8$  are the same or different and are independently hydrogen, an electron donating or electron withdrawing group;

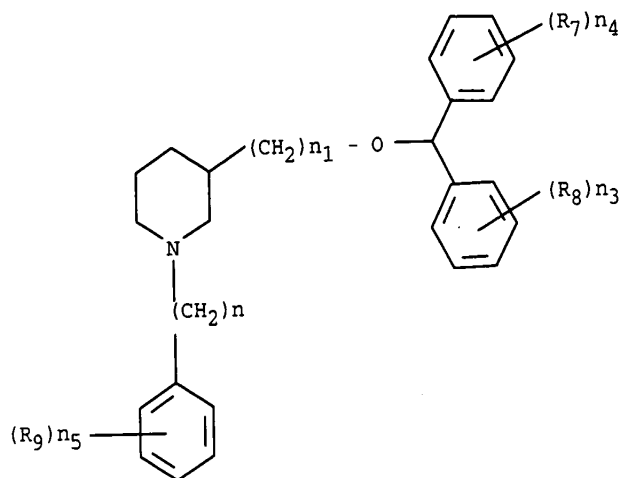
$\text{R}_9$  is hydrogen, an electron donating group or electron withdrawing group;

$n_3$ ,  $n_4$  and  $n_5$  are independently 1-5; and

$n$  and  $n_1$  are independently 1-8.

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24. The compound according to Claim 21 having the formula:



wherein

each  $R_7$  and each  $R_8$  are the same or different and are independently hydrogen, an electron donating or electron withdrawing group;

$R_9$  is hydrogen, an electron donating group or electron withdrawing group;

$n_3$ ,  $n_4$  and  $n_5$  are independently 1-5; and

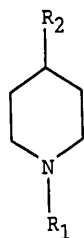
$n$  and  $n_1$  are independently 1-8.

25. The compound according to any one of Claims 21-24 wherein  $n_1$  is 1.

26. The compound according to any one of Claims 21-24 wherein the electron donating group is amino, hydroxy or alkoxy and the electron withdrawing group is halo, lower alkyl, nitro or nitrile.



27. The compound according to Claim 18 having the structure

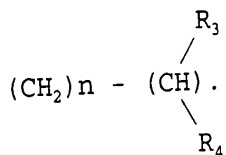


wherein

$R_1$  is Q and  $R_2$  is hydrogen or  $Q'$ .

28. The compound according to Claim 27 wherein

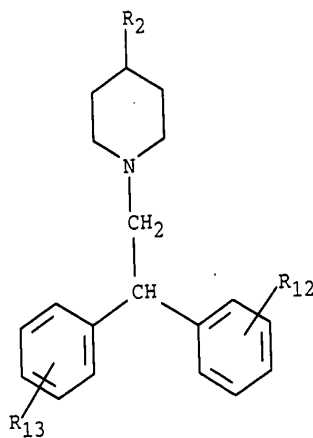
$R_1$  is



29. The compound according to Claim 28 wherein  $n$  is 1.

30. The compound according to any one of Claims 27-29 wherein  $R_3$  and  $R_4$  are independently phenyl.

31. The compound according to Claim 27 having the structure



wherein

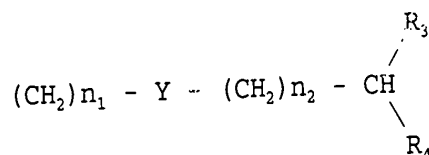
$R_{13}$  and  $R_{12}$  are independently hydrogen, an electron donating group or an electron withdrawing group.

32. The compound according to Claim 31 wherein

$R_2$  is H.

33. The compound according to Claim 31 wherein

$R_2$  is



wherein

Y is O, S, NH or  $CH_2$ ;

$R_3$  and  $R_4$  are independently the same or different and are cyclic rings containing 6-14 ring carbon atoms, which cyclic rings are aromatic and which are unsubstituted or substituted with an electron donating group or an electron withdrawing group;

$n_1$  is 1-8, and  $n_2$  is 0-8.

34. The compound according to Claim 33 wherein

Y is O.

35. The compound according to Claim 33 or 34 wherein  $R_3$  and  $R_4$  are independently phenyl rings which are unsubstituted or substituted with an electron donating group or electron donating groups.

36. The compound according to Claim 33 wherein

$n_1$  is 1.

37. The compound according to Claim 33 wherein

$n_2$  is 0.

38. The compound according to Claim 33 wherein

$n_1$  is 1 and  $n_2$  is 0.

39. The compound according to Claim 31 having

~~C7~~ <sup>Sub</sup> the formula:

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CZ  
cat

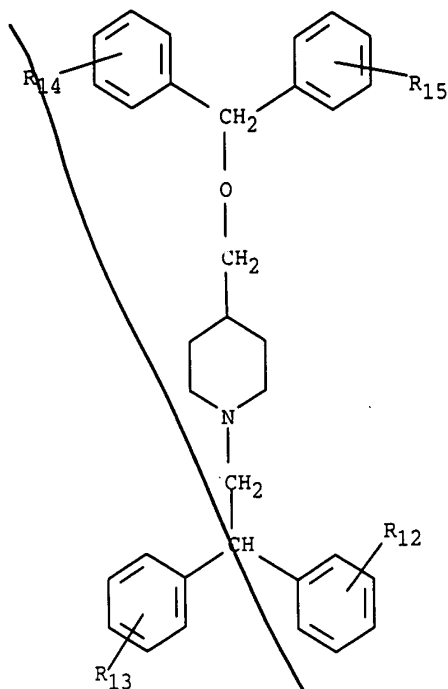
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wherein

R12, R13, R14 and R15 are independently hydrogen, electron withdrawing group or electron donating group.

40. A stereoisomer of the compound of Claim 1.

41. A pharmaceutical composition comprising a cytostatic effective amount of a compound according to Claim 1 and a pharmaceutically acceptable carrier therefor.

42. A method of inhibiting cancer cell proliferation in a mammal in need of such treatment comprising administering to said mammal a cytostatic effective amount of a compound according to any one of Claims 1, 7, 8, 11, 12, 17, 18, 21, 22, 23, 24 or 31.

43. The method according to Claim 42 wherein said mammal is a human.

44. The method according to Claim 43 wherein the compound is administered in amounts ranging from about .5 mg to about 100 mg/kg of body weight per day.

5 ~~523~~ 45. A method of treating cancer in a mammal in need thereof comprising administering to said mammal an effective amount of a compound according to any one of Claims 1, 7, 8, 11, 12, 17, 18, 21, 22, 23, 24 or 31.

46. A substantially pure compound of Claim 1.

10 ~~523~~ 47. A method of treating cancer in an animal afflicted with such disease which comprises administering to an animal in need of such treatment an organic calcium blocker that inhibits the entry of calcium ions across the cell membrane through a T-like calcium channel in cancer cells in response to a mitogenic stimulus, said calcium blocker being present in an amount effective to inhibit the passage of calcium into the cell.

15 48. The method according to Claim 47 in which the compound blocks calcium entry into the cell by interacting with the  $\alpha 1$  subunit of a calcium channel.

20 49. The compound according to Claim 1 which contains 1 additional heteroatom selected from the group consisting of O and N.

50. The compound according to Claim 1 which contains no additional heteroatoms.

25 51. The method according to Claim 48 wherein the  $\alpha 1$  subunit is an  $\alpha 1G$  or  $\alpha 1H$

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